

RECEIVED

MAR 26 2002

TECH CENTER 1600/2000



ENTERED

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/970,477

DATE: 03/15/2002

TIME: 14:42:32

Input Set : A:\26294005US4.app

Output Set: N:\CRF3\03152002\I970477.raw

3 <110> APPLICANT: Lorincz, Attila T.
5 <120> TITLE OF INVENTION: ASSESSMENTS OF HUMAN PAPILLOMA VIRUS-RELATED DISEASE
7 <130> FILE REFERENCE: 2629-4005US4
9 <140> CURRENT APPLICATION NUMBER: 09/970,477
10 <141> CURRENT FILING DATE: 2001-10-04
12 <150> PRIOR APPLICATION NUMBER: U.S. 09/210,168
13 <151> PRIOR FILING DATE: 1998-12-11
15 <150> PRIOR APPLICATION NUMBER: U.S. 60/082,167
16 <151> PRIOR FILING DATE: 1998-04-17
18 <150> PRIOR APPLICATION NUMBER: U.S. 60/070,486
19 <151> PRIOR FILING DATE: 1998-01-05
21 <150> PRIOR APPLICATION NUMBER: U.S. 60/069,426
22 <151> PRIOR FILING DATE: 1997-12-12
24 <160> NUMBER OF SEQ ID NOS: 5
26 <170> SOFTWARE: PatentIn Ver. 2.1
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 1390
30 <212> TYPE: DNA
31 <213> ORGANISM: Human papillomavirus
33 <220> FEATURE:
34 <223> OTHER INFORMATION: L2-HPV16
36 <400> SEQUENCE: 1
37 ttgttggtata ccataactta ctattttttt ttttttattt tcatatataa tttttttttt 60
38 tgtttgtttg tttgtttttt aataaactgt tattacttaa caatgcgaca caaacgttct 120
39 gcaaaacgca caaacgtgc atcggctacc caactttata aaacatgcaa acaggcaggt 180
40 acatgtccac ctgacattat acctaagggt gaaggcaaaa ctattgctga acaaatatta 240
41 caatatggaa gtatgggtgt atttttttgt ggggttaggaa ttggaacagg gtcgggtaca 300
42 ggcggacgca ctgggtatat tccattggga acaaggcctc ccacagctac agatacactt 360
43 gctcctgtaa gacccctttt aacagtagat cctgtgggcc cttctgatcc ttctatagtt 420
44 tcttttagtg aagaaactag ttttattgat gctgggtgcac caacatctgt accttcatt 480
45 cccccagatg tatcaggatt tagtattact acttcaactg ataccacacc tgctatatta 540
46 gatattaata atactgttac tactgttact acacataata atcccacttt cactgacca 600
47 tctgtattgc agcctccaac acctgcagaa actggagggc attttacact ttcacatcc 660
48 actattagta cacataatta tgaagaaatt cctatggata catttattgt tagcacaac 720
49 cctaacacag taactagtag cacaccata ccagggtctc gccagtggc acgcctagga 780
50 ttatatagtc gcacaacaca acagggttaa gttgtagacc ctgcttttgt aaccactccc 840
51 actaaactta ttacatatga taactcctgca tatgaaggta tagatgtgga taatacata 900
52 tatttttcta ttaagtataa tagtattaat atagctccag atcctgactt tttggatata 960
53 gttgctttac ataggccagc attaacctct aggcgtactg gcattaggta cagtagaatt 1020
54 ggtaataaac aaacactacg tactcgtagt ggaaaatcta taggtgctaa ggtacattat 1080
55 tattatgatt taagtactat tgatcctgca gaagaaatag aattacaaac tataacacct 1140
56 tctacatata ctaccacttc acatgcagcc tcacctactt ctattaataa tggattatat 1200
57 gatatttatg cagatgactt tattacagat acttctacaa ccccggtacc atctgtaccc 1260

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/970,477

DATE: 03/15/2002

TIME: 14:42:32

Input Set : A:\26294005US4.app

Output Set: N:\CRF3\03152002\I970477.raw

58 tctacatctt tatcagggtta tttccttgca aatacaacaa ttcccttttg tggtgcatac 1320
 59 aatattcctt tagtatcagg tcctgatata cccattaata taactgacca agtccttca 1380
 60 ttaattccta 1390

63 <210> SEQ ID NO: 2

64 <211> LENGTH: 1484

65 <212> TYPE: DNA

66 <213> ORGANISM: Human papillomavirus

68 <220> FEATURE:

69 <223> OTHER INFORMATION: L1-HPV16

71 <400> SEQUENCE: 2

72 gaggccactg tctacttgcc tcctgtccca gtatctaagg ttgtaagcac ggatgaatat 60
 73 gttgcacgca caaacatata ttatcatgca ggaacatcca gactacttgc agttggacat 120
 74 cctatttttc ctattaaaaa acctaacaat aacaaaatat tagttcctaa agtatcagga 180
 75 ttacaataca gggatattag aatacattta cctgacccca ataagtttg ttttccctgac 240
 76 acctcatttt ataattccaga tacacagcgg ctggtttggg cctgtgtagg tgttgaggta 300
 77 ggtcgtggtc agccattagg tgtgggcatt agtggccatc ctttattaaa taaattggat 360
 78 gacacagaaa atgctagtgc ttatgcagca aatgcagggtg tggataatag agaattgata 420
 79 tctatggatt acaaacaaac acaatttgtt ttaattgggt gcaaaccacc tataggggaa 480
 80 cactggggca aaggatcccc atgtaccaat gttgcagtaa atccagggtga ttgtccacca 540
 81 ttagagttaa taaacacagt tattcaggat ggtgatattg ttccatactgg ctttggtgct 600
 82 atggacttta ctacattaca ggctaacaaa agtgaagttc cactggatat ttgtacatct 660
 83 atttgcaaat atccagatta tattaaaatg gtgtcagaac catatggcga cagcttattt 720
 84 ttttattttac gaagggaaca aatgtttgtt agacatttat ttaatagggc tgggtactgtt 780
 85 ggtgaaaatg taccagacga tttatacatt aaaggctctg ggtctactgc aaatttagcc 840
 86 agttcaaatt attttcctac acctagtggg tctatgggta cctctgatgc ccaaattatc 900
 87 aataaacctt attgggtaca acgagcacag ggccacaata atggcatttg ttggggtaac 960
 88 caactatttg ttactgttgt tgatactaca cgcagtacaa atatgtcatt atgtgctgcc 1020
 89 atatctactt cagaaactac atataaaaaa actaacttta aggagtacct acgacatggg 1080
 90 gaggaatatg atttacagtt tatttttcaa ctgtgcaaaa taaccttaac tgcagacggt 1140
 91 atgacataca tacattctat gaattccact attttggagg actggaattt tgggtctaca 1200
 92 cctccccag gaggcacact agaagatact tatagggttg taaccagggc aattgcttgt 1260
 93 caaaaacata cacctccagc acctaaagaa gatgatcccc ttaaaaaata cacttttttg 1320
 94 gaagtaaatt taaaggaaaa gttttctgca gacctagatc agtttccctt aggacgcaa 1380
 95 tttttactac aagcaggatt gaaggccaaa ccaaaattta cattaggaaa acgaaaagct 1440
 96 acaccacca cctcatctac ctctacaact gctaaacgca aaaa 1484

99 <210> SEQ ID NO: 3

100 <211> LENGTH: 779

101 <212> TYPE: DNA

102 <213> ORGANISM: Human papillomavirus

104 <220> FEATURE:

105 <223> OTHER INFORMATION: E6/E7-HPV16

107 <400> SEQUENCE: 3

108 acattttatg caccaaaaga gaactgcaat gtttcaggac ccacaggagc gaccagaaa 60
 109 gttaccacag ttatgcacag agctgcaaac aactatacat gatataatat tagaatgtgt 120
 110 gtactgcaag caacagttac tgcgacgtga ggtatatgac tttgcttttc gggatttatg 180
 111 catagtatat agagatggga atccatatgc tgtatgtgat aaatgtttta agttttattc 240
 112 taaaattagt gagtatagac attattgtta tagtttgtat ggaacaacat tagaacagca 300
 113 atacaacaaa ccgttgtgtg atttggttaat taggtgtatt aactgtcaaa agccactgtg 360
 114 tcctgaagaa aagcaaagac atctggacaa aaagcaaaga ttccataata taaggggtcg 420

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/970,477

DATE: 03/15/2002

TIME: 14:42:32

Input Set : A:\26294005US4.app

Output Set: N:\CRF3\03152002\I970477.raw

```

115 gtggaccggt cgatgtatgt cttgttgacg atcatcaaga acacgtagag aaaccagct 480
116 gtaatcatgc atggagatac acctacattg catgaatata tgtagattt gcaaccagag 540
117 acaactgacg tctactgtta tgagcaatta aatgacagct cagaggagga ggatgaaata 600
118 gatggtccag ctggacaagc agaaccggac agagcccatt acaatattgt aaccttttgt 660
119 tgcaagtgtg actctacgct tcggttggtg gtacaaagca cacacgtaga cattcgtact 720
120 ttggaagacc tgtaaatggg cacactagga attgtgtgcc ccctctgttc tcagaaacc 779
123 <210> SEQ ID NO: 4
124 <211> LENGTH: 1113
125 <212> TYPE: DNA
126 <213> ORGANISM: Human papillomavirus
128 <220> FEATURE:
129 <223> OTHER INFORMATION: E2- HPV16
131 <400> SEQUENCE: 4
132 gaggacgagg acaaggaaaa cgatggagac tctttgccaa cgtttaaatg tgtgtcagga 60
133 caaaatacta acacattatg aaaatgatag tacagaccta cgtgaccata tagactattg 120
134 gaaacacatg cgcctagaat gtgctattta ttacaaggcc agagaaatgg gatttaaaca 180
135 tattaaccac caagtgggtg caacactggc tgtatcaaag aataaagcat tacaagcaat 240
136 tgaactgcaa ctaacgttag aaacaatata taactcaca tatagtaatg aaaagtggac 300
137 attacaagac gttagccttg aagtgtatgt aactgcacca acaggatgta taaaaaaca 360
138 tggatataca gtggaagtgc agtttgatgg agacatatgc aatacaatgc attatacaaa 420
139 ctggacacat atatatttt gtgaagaagc atcagtaact gtggtagagg gtcaagttga 480
140 ctattatggt ttatattatg ttcatgaagg aatacgaaca ttttttgtgc agtttaaaga 540
141 tgatgcagaa aaatatagta aaaataaagt atgggaagtt catgcgggtg gtcaggtaat 600
142 attatgtcct acatctgtgt ttagcagcaa cgaagtatcc tctcctgaaa ttattaggca 660
143 gcacttgccc aaccaccccg ccgcgaccca taccaaagcc gtcgccttgg gcaccgaaga 720
144 aacacagacg actatccagc gaccaagatc agagccagac accggaaacc cctgccacac 780
145 cactaagttg ttgcacagag actcagtggg cagtgtctca atcctcactg catttaacag 840
146 ctcacacaaa ggacggatta actgtaatag taacactaca cccatagtac atttaaaagg 900
147 tgatgctaata actttaaaat gtttaagata tagatttaaa aagcattgta cattgtatac 960
148 tgcagtgtcg tctacatggc attggacagg acataatgta aaacataaaa gtgcaattgt 1020
149 tacacttaca tatgatagtg aatggcaacg tgaccaattt ttgtctcaag ttaaaatacc 1080
150 aaaaactatt acagtgtcta ctggatttat gtc 1113
153 <210> SEQ ID NO: 5
154 <211> LENGTH: 262
155 <212> TYPE: DNA
156 <213> ORGANISM: Human papillomavirus
158 <220> FEATURE:
159 <223> OTHER INFORMATION: E4-HPV16
161 <400> SEQUENCE: 5
162 ctacatctgt gtttagcagc aacgaagtat cctctcctga aattattagg cagcacttgg 60
163 ccaaccaccc cgccgcgacc cataccaaag ccgtgcctt gggcaccgaa gaaacacaga 120
164 cgactatcca gcgaccaaga tcagagccag acaccggaaa cccctgccac accactaagt 180
165 tgttgcacag agactcagtg gacagtgtc caatcctcac tgcatttaac agctcacaca 240
166 aaggacggat taactgtaat ag 262

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/970,477

DATE: 03/15/2002

TIME: 14:42:33

Input Set : A:\26294005US4.app

Output Set: N:\CRF3\03152002\I970477.raw